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Dermis-fat-transplantation by Anophthalmic Socket Syndrome

Anophthalmic Socket Syndrome is due to the loss of tissue in the orbit following anophthalmus. This makes it difficult, if not impossible, to fit a prosthesis. Limited success Anophthalmic Socket Syndrome is due to the loss of tissue in the orbit following anophthalmus.

This makes it difficult, if not impossible, to fit a prosthesis. Limited success has been achieved through

the implant of alloplastic materials into the orbit. However, using autologous materials often gives better results because of decreased risk of exposure and infection

Here we describe a way of dermis-fat grafting, not only using gluteal fat, but additional wrap dermis around the fat.

The surgical technique for autologous dermis-fat transplantation is illustrated in a picture series. This

procedure can be done as a primary or secondary orbital implantation. It involves harvesting fat with attached dermis from the patient's gluteal area. Before inserting the fat into the orbital socket, dermis is wrapped around the fat. This method has been used alone or combined with an alloplastic transplant.

The first patient was 35 year old. At age 12 he was hit by a rocket that perforated his left eye.

Patient nr. 1



Pre. op

5 years post. op

Conjunctiva grows spontaneously over the dermis fat. By lack of mucous membrane, as on this Patient, conjunctiva can be left open on purpose



The second patient was 62 years old. She had an accident that perforated her left eye at age 6. Patients with eye-injuries often suffer from additional eye-lid damage, in this case ptosis. A levator-resection was therefore performed in a later procedure.

Patient nr. 2



Pre. op

4 years post. op

The third patient was 60 year old, and a particularly challenging case. Her left eye had been removed 10 years ago due to malignant iris-melanoma, and her socket was completely contracted after post- surgery radiation. On this patient, various types of prior surgery had been attempted, such as abdominal fat transplant and injections, oral mucousa transplant,

and temporal-advancement-flap, all of which had failed. Her eyelids were completely adherent to the orbital tissue and it was impossible to fit a prosthesis until she had a dermis-fat transplantation. She also needed additional eye-lid surgery, with tarsoconjunctival transplant, and later a skin-transplant.

Patient nr. 3



Pre. op

5 years post. op

The final results, after 5 year follow-up of the first patient, and 4 year follow-up of the second and third, were excellent.

One reason why this method has good results is the way the fat is prepared and covered with dermis at all sides before inserting it into the orbit. The dermis-wall protects the fat from macrophages and delays the break-down process.

Conclusion: Dermis-fat graft-

ing using gluteal fat covered with dermis, can be used for treatment of anophthalmic socket syndrome, and is associated with good functional and cosmetic results, especially when correcting difficult and contracted sockets. In such cases, the dermis-fat adds surface and volume needed for a successful result. With this method the transplanted fat can last for up to 20 years saving the patient from further operations. ■

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